

Appl. No. 10/707,422
Docket No. 139805/GEM-0091

REMARKS / ARGUMENTS

Status of Claims

Claims 1, 2, 5-13, 16-21, 24-28, 30 and 31 are pending in the application. Claims 1, 2, 5, 6, 8-13, 16-21, 26-28, 30 and 31 stand rejected. Claims 7, 24 and 25 are objected to as being dependent upon a rejected claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant appreciates the Examiner's notation of the allowable claims. Applicant has amended Claims 1, 6, 7, 10, 12, 20, 24, and 27, and cancelled Claims 2, 13, 21, and 31, leaving Claims 1, 5-12, 16-20, 24-28, and 30 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §112, second paragraph, 35 U.S.C. §102(b), and 35 U.S.C. §103(a) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

Claim Objections

Claims 2, 13, 21 and 31 are objected to for reasons relating to improper dependent form for failing to further limit the subject matter of a previous claim. Applicant has cancelled Claims 2, 13, 21 and 31, thereby overcoming these objections.

Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw these objections, which Applicant considers to be overcome.

Rejections Under 35 U.S.C. §112, Second Paragraph

Claims 12, 13 and 16-19 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention.

The Examiner comments that Claims 12, 13, and 16-19 are rejected as being incomplete for omitting essential structural cooperative relationships of elements, such

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omission amounting to a gap between necessary structural connections. The omitted structural cooperative relationships are: the housing and the means for calculating.

Applicant has cancelled Claims 12, and 16-19.

Applicant has amended Claim 12 to now recite, inter alia

*"...a first means responsive to the x-ray beam allowed to enter the housing for calculating a position of a focal spot; and
a second means responsive to the x-ray beam allowed to enter the housing for further calculating the position of the focal spot."*

No new matter has been added as antecedent support can be found in the application as originally filed, such as at Paragraph [0027] and Figure 4, for example.

Applicant respectfully submits that the present amendment remedies the gap between necessary structural connections, specifically, the housing and the means for calculating.

In view of the foregoing, Applicant respectfully submits that the claimed subject matter is described in such a manner that reasonably conveys to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection, which Applicant considers to be traversed.

Rejections Under 35 U.S.C. §102(b)

Claims 27, 28 and 31 stand rejected under 35 U.S.C. §102(b) as being anticipated by Gard et al. (U.S. Patent No. 5,131,021, hereinafter Gard).

Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*" *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the *** claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir.

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1989). Furthermore, the single source must disclose all of the claimed elements "arranged as in the claim." Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. Titanium Metals Corp. v. Banner, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

Applicant has canceled Claim 31 and has amended Claim 27 to now recite, inter alia,

"...calculating a position in two dimensions of the focal spot..." by way of *"...at least three detector elements arranged on two orthogonal axes..."*.

No new matter has been added by these amendments as antecedent support may be found in the specification as originally filed, such as at Paragraph [0027] and Figure 4, for example.

Dependent claims inherit all of the limitations of the respective parent claim.

In alleging anticipation, the Examiner asserts "...Gard et al disclosed a method...calculating a position of the focal spot ...". [Paper 20061116, page 30] Applicant finds Gard to disclose "...generating a robust z-axis position signal..." [Gard, col 3, lines 55-56]. Applicant submits that Gard is absent disclosure of the now claimed *"... calculating a position in two dimensions of the focal spot..."*.

Accordingly, Applicant submits that Gard does not disclose each and every element of the claimed invention arranged as in the claim, and absent anticipatory disclosure in Gard of each and every element of the claimed invention arranged as in the claim, Gard cannot be anticipatory.

In view of the amendment and foregoing remarks, Applicant submits that Gard does not disclose each and every element of the claimed invention arranged as claimed and therefore cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner's rejection under 35 U.S.C. §102(b) has been traversed, and requests that the Examiner reconsider and withdraw of this rejection.

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Rejections Under 35 U.S.C. §103(a)

Claims 1, 2, 10-12, 13, 18-20 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gard et al. in view of Sasaki et al. (U.S. Patent No. 6,411,672, hereinafter Sasaki).

Claims 5, 6, 8, 9, 16, 17 and 30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gard and Sasaki as applied to claims 1, 12 and 27 and further in view of Warren (U.S. Patent No. 6,362,481, hereinafter Warren).

Applicant traverses these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03. Additionally, Applicant respectfully submits that a prima facie case of obviousness cannot be supported by a proposed modification that would render the prior art invention being modified unsatisfactory for its intended purpose. *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984); MPEP §2143.01.

Dependent claims inherit all of the limitations of the respective parent claim and any intervening claim.

Regarding Independent Claim 1

Applicant has amended Claim 1 to now include limitations directed to at least three detector elements arranged on orthogonal axes for providing a position indicator for the focal spot *in two dimensions*.

No new subject matter has been added, as antecedent support may be found in the specification as originally filed, such as at Paragraph [0027] and Figure 4, for example.

Applicant finds Gard to disclose "The rear edge 34 is the extreme edge of the detector array 14 in one direction along the z axis, and will be defined as Z=0, whereas

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the front edge 32 of the detector array is defined as the other edge of the detector array 14 at its extreme in the other direction along the z axis, and will be taken as $Z=1$." [Gard, Col 5, lines 54-59].

The Examiner acknowledges that "Gard et al failed to disclose that the sensor device is disposed in a housing with an opening...", and looks to Sasaki to cure these deficiencies. The Examiner remarks "It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to dispose the sensor device in a housing as disclosed by Sasaki et al. First a person would be motivated to protect the CT detector. Second, a person would be motivated to provide a means to mount the CT detector to the rotating gantry. And third, a person would be motivated to obtain a CT image without artifacts by reducing temperature non-uniformity in the detector elements." [Paper 20061116, page 5]. As such, the Examiner applies Sasaki to cure the deficiencies of Gard only with respect to the housing.

In comparing the combination of references with the claimed invention, Applicant respectfully submits that the combination of Gard and Sasaki are absent a teaching of the now claimed limitations directed to *at least three detector elements* arranged on *orthogonal axes* for providing a position indicator for the focal spot *in two dimensions*.

Accordingly, Applicant respectfully submits that the combination of Gard and Sasaki fail to teach or suggest each and every element of the claimed invention arranged in such a manner as to perform as the claimed invention performs, and therefore cannot properly be used to establish a prima facie case of obviousness.

Regarding Independent Claim 12

Applicant has amended Claim 12 in a manner similar to that of amended Claim 1.

No new subject matter has been added, as antecedent support may be found in the specification as originally filed, such as at Paragraph [0027] and Figure 4, for example.

For at least the same reasons as set forth above regarding independent Claim 1, Applicant respectfully submits that the combination of Gard and Sasaki fails to teach or suggest each and every element of the claimed invention arranged in such a manner as to perform as the claimed invention performs, and therefore cannot properly be used to

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establish a prima facie case of obviousness.

Regarding Independent Claim 20

Applicant has amended Claim 20 to now recite, inter alia "... a detector array that *receives the x-ray beam and includes a focal spot sensing device disposed at only one edge of the detector array in place of a single detector element of the detector array...*".

No new matter has been added, as antecedent support is found in the specification as originally filed, such as at Paragraph [0023] and Figure 2, for example.

Applicant finds Gard to teach "These peripheral beams 24 are received by peripheral detector cells 18 within the detector array 14." [Gard, col. 4, lines 67-68]. Applicant finds Sasaki to teach a "...case 17 having a substantially C-shaped cross section..." [Sasaki, col 3, line 30].

Applicant respectfully submits that the combination of Gard and Sasaki is absent a teaching of the now claimed "...*a focal spot sensing device disposed at only one edge of the detector array in place of a single detector element of the detector array...*"

Accordingly, Applicant respectfully submits that the combination of Gard and Sasaki fails to teach or suggest each and every element of the claimed invention arranged in such a manner as to perform as the claimed invention performs, and therefore cannot properly be used to establish a prima facie case of obviousness.

In view of the foregoing, Applicant submits that the combination of the References fail to teach or suggest each and every element of the claimed invention arranged in a manner to perform as the claimed invention performs, and are therefore wholly inadequate in their teaching of the claimed invention as a whole, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

In light of the forgoing, Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §112, second paragraph have been obviated, and the rejections

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under 35 U.S.C. §102(b), and 35 U.S.C. §103(a) have been traversed, and respectfully requests that the Examiner reconsider and withdraw these rejections.

Regarding Claims 7, 24 and 25

The Examiner comments that Claims 7, 24 and 25 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant has rewritten Claims 7 and 24 in independent form, submits that Claims 7 and 24 and claims dependent therefrom are directed to allowable subject matter, and respectfully requests notice of allowance thereof.

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The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 07-0845.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,

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